CLAIMS:

1. A method of channel allocation in a cellular communication network wherein a radio channel is to be selected for establishment of a connection in an environment with potentially interfering signals, the method comprising:

establishing a radio channel candidate;

processing the radio channel candidate with potentially interfering signals and calculating a carrier to interference ratio (CIR) for the selected carrier frequency of the radio channel candidate and the potentially interfering signals;

calculating a dominant interference ratio (DIR) being the ratio of the strongest potentially interfering signal with respect to the other potentially interfering signals; and

using criteria based on at least one of the dominant interference ratio and the carrier to interference ratio in a selection process for selecting a channel for the connection to be established.

2. A method according to claim 1, wherein the radio channel candidate and potentially interfering signals are processed using an interference cancellation technique

3. A method according to claim 2, wherein the dominant interference ratio is used to establish an indication as to the gain provided by the interference cancellation technique, that gain being used to establish a criteria for channel selection.

4. A method according to claim 3, wherein the interference cancellation gain is used to modify an estimate of the carrier to interference ratio before using the carrier to interference ratio as a basis for criteria in the channel selection process.

5. A method according to any preceding claim, wherein one of the criteria used in the selection process is the maximum value of the minimum difference

between the calculated carrier to interference ratio and a target carrier to interference ratio.

6. A method according to any preceding claim, where one of the criteria used in the selection process is the average dominant interference ratio taken over a set of n connections which could be interfered with by the connection to be established.

7. A method according to claim 3, wherein the gain provided by the interference cancellation technique is established from the dominant interference ratio using a predefined function.

8. A system for channel allocation in a cellular communication network wherein a radio channel is to be selected for establishment of a connection in an environment with potentially interfering signals, the system comprising:

means for establishing a radio channel candidate;

means for processing the radio channel candidate with potentially interfering signals and calculating a carrier to interference ratio (CIR) based on the selected carrier frequency of the radio channel candidate and the potentially interfering signals; and

means for calculating a dominant interference ratio (DIR) being the ratio of the strongest potentially interfering signal with respect to the other potentially interfering signals, the system further comprising means for implementing a selection process for selecting a channel for the connection to be established using criteria based on at least one of the dominant interference ratio and the carrier to interference ratio.

9. A system according to claim 8, which comprises means for applying an interference cancellation technique to the radio channel candidate and potentially interfering signals.

10. A system according to claim 9, which comprises means for using the dominant interference ratio to establish an indication as to the gain provided by the interference cancellation technique, that gain being used to establish a criteria for channel selection.

11. A base station controller in a cellular communication network which includes a system according to claim 8, 9 or 10.

12. A cellular communication network comprising a plurality of base stations, at least some of which include a system according to claim 8, 9 or 10.